



The Impact of Total Quality Management (Employee Training and Continues Improvement) on the Performance of the Yemeni Higher Education Sector

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ABSTRACT

This study examined the relationship between employee training, continuous improvement, and the performance of the Yemeni higher education sector. Survey questionnaires were used to collect the data. Then The data was analyzed using SPSS and Smartpls programs. The unit of analysis for the study was 272 employees in higher education institutions in Yemen. The result showed positive and significant relationships between employee training, continuous improvement, and higher education performance in Yemen. It has been widely accepted that continuous improvement is essential to the success of TQM. TQM will be successful not only with the effort and activity of a particular person or group but with constant improvement and management skills. For this, the importance given to the subject and the leadership of the senior management in educational institutions is paramount. Giving importance to long-term goals and participating in group work with determination in the unity of the target of all employees, disciplined, planned, from the top position to the bottom employees, training should be given to understand and apply TQM with specific goals.

1. Introduction

The higher education sector is witnessing great interest in most countries of the world and at all levels; Reforms in this important sector have also received special care because of its great importance in the essential role it contributes to the development of society and its advancement for the better in order to keep pace with the renewed needs that arise in human societies through the provision of qualified technical cadres scientifically and practically and through preparing leaders for the future with different fields. Higher education institutions in Arab countries face very dangerous challenges and threats that have arisen from variables that have played a major role in changing the shape of the world, creating a new global system that adopts accelerated science and technological development as a basis for them, and is based on highly advanced and superior technologies, which leaves no room for hesitation in starting With comprehensive development and modernization programs, these institutions are guaranteed the ability to overcome their problems and weaknesses (Al-shafei et al., 2015).

Total Quality Management (TQM) is one of the most important waves that have attracted great interest by leaders, managers, practitioners and academic researchers, as one of the prevailing and desirable management concepts in the current period, and this concept is related to the quality itself, which indicates the overall Features and features related to service in accordance with the apparent and complete needs of the beneficiaries, as it was described as the third revolutionary wave after the industrial revolution and the computer revolution, and emerged as a result of intense global competition between Japanese production institutions on the one hand and the American and European on the other hand, and that to obtain consumer satisfaction, most studies confirmed that the implementation of TQM has positive repercussions on the performance of organizations that apply it, by increasing productivity, improving profitability, lower costs, and improving current performance, improvement of employee relations, and high levels of job satisfaction with them, and with indicators showing the feasibility of total quality management, its importance has increased, and its spread (Aminbeidokhti et al., 2016).

TQM is one of the recent management philosophies that have emerged due to global competition between the various productive institutions in the developed world (Al-Maamari, 2020). As a result of this success, this philosophy has begun to be taken in higher education institutions to improve education and improve its quality to interact with the political, economic and social changes accompanying the scientific explosion. Technological development, scientific expansion, and social pressures on universities increase demand and the desire to enrol in university programs at different levels (Isaac et al., 2019). The higher education institutions in Yemen are witnessing an increase in the demand for enrollment in educational programs in universities and colleges. The low quality of education has become a national concern confirmed by the Yemeni higher education ministry (Al-Maamari, 2020). As well as it has been observed in recent years, due to the current situation in Yemen, there is a severe decline and deficiency in the stages of education in general and higher education in particular. There are many reasons for this significant decline in the level of higher education in Yemen, specifically the low performance of higher education institutions (Isaac et al., 2019). As previously mentioned,

there is no application for total quality management in educational institutions in Yemen (Aldholay et al., 2019). This study aims to find out the total quality management (employee training and continuous improvement) on the performance of the Yemeni higher education sector. This research will provide a comprehensive literature review of the research variables. The following sections will show the methodology used in this research, as well as the tests and examinations used in the study. This paper will also discuss the findings of this research and include a conclusion for this research.

2. Literature Review

There are many and varied definitions of the concept of quality and specifying it to respond to the academic philosophy of each institution and adjusting it to the mission, context, and users would be one of the first challenges. As stated by Talavera (2001) to determine the concept of quality, it is necessary to clarify what type of customer the service is aimed at, positioning itself centrally as a reference for the activities of the organization or to determine if the product or service is of quality by evaluating if it has fulfilled a series of variables and assessing the degree of satisfaction on the part of the users who demand or use it. Not all authors agree with this mimetic translation from the business world to the educational sector, but it is necessary to understand the perspective of other approaches that identify it with school performance, accepting that the conceptual delimitation of the idea of educational quality includes other dimensions and unidentified approaches in the business sector (Alsikkah et al., 2018). Internationally, quality management in educational centres also presents different approaches; for example, in the USA, it was introduced at the beginning of the s. (Anis & Islam, 2019) and was oriented towards total quality management systems. In Europe, it is committed to evaluating the quality and its assurance; specifically, it focuses on the family of ISO 9000 Standards. Fuentes (2002) highlights the important role that actually plays in the consumer's judgment and quotes Grönroos (1990), stating that the value of quality should prevail since it is what any consumer perceives. The buyer or buyer values and determines the quality of the product or service; that is, their perception is the quality itself. The authors of the international report of the "Organization for Economic Cooperation and Development" (OECD, 1991) shy away from "a single and strict definition of quality" (p. 37) which is manifested in line with what Gairín Sallán (1999) exposes in his definition of quality, as a controversial concept. This author affirms that the organization of the centres only makes sense if it is aimed at improvement and committed to the realization of a certain pedagogical project or centre. In the same sense, the proposals of Galgano (1993) move who affirms that: If it is true that quality is the predominant factor, I have to ensure that all the people in the company are interested in it and what is more, if the quality is the main thing, it must permeate the entire company, which means that the company must be structured according to quality (p. 44).

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The available literature on quality evaluation in educational centres is based mainly on studies of effective schools, But if it stops to analyze the evolution of the definitions, it can see that the key procedure, the objective of every educational centre, was never ignored. Thus, the OECD (2005) defines quality education as one that "ensures that all young people acquire the knowledge, capacities, skills and attitudes necessary to equip them for adult life; but all the variables that influence this training must be taken into account. Along the same lines, Mortimore (1992) considers that the achievements or progress of the students (intellectual, social, emotional and moral) define the school and based on the results they obtain, they may be specified as quality schools, noting that there are Influential factors that it must take into accounts such as socioeconomic status, family and previous learning. The same author emphasizes that the system favours the achievement of results, pointing to the need to implement effective systems that maximize these capacities.

2.1 Total Quality Management Model

TQM enables organizations to acquire an abnormal state of brilliance to address client issues and institutionalize the mark picture, lessen costs by avoiding blunders, exercise in futility and create organization forms as per Abdallah (2014). TQM is a culture, point of view and organization determination that endeavours to supply products and enterprises that prompt address client issues. This culture incorporates all activities as the organization did in the underlying stage: zero waste and zero mistakes. Quality thought has undergone numerous stages, fitting into each level of innovation and market request. Thus, the last layer of profitability choice was chosen by measurable observing of fantastic characters, at that point extending the procedure and picking up the possibility of quality as an important component in the delivery of goods and services (Samuel et al., 2010). According to Azam, Rahman, Talib, & Singh (2012), the portal gradually receives

quality attention to the emergence of TQM as a full-scale concept of parallel measurements, such as competition with concept and concurrent engineering. (Aghamolaei et al., 2014; Mohammad Mosadeghrad, 2014a) studies by all these authors indicate both strengths and weaknesses, none of which suggest any decisions on the issues faced by firms, although some common problems can be controlled, Such as planning and quality for development Continuous, operations management, staff participation and management leadership (Mohammad Mosadeghrad, 2014b).

TQM is a broad push to build up and make the atmosphere lasting, as the organization consistently enhances its capacity to convey top-notch items and administrations to its clients. While there is no generally concurred approach, TQM endeavours depend vigorously on the devices and systems that have just been created for quality control. TQM got broad consideration in the late 1980s and mid-1990s, preceding it was granted ISO 9000, lean assembling and six sigma (Mohammad Mosadeghrad, 2014b).

3. Research Model and Hypotheses

The relationship between TQM and performance is analyzed according to the degree of application of TQM principles. In this respect, studies investigate the relationship between TQM and operational performance. The purpose of this study in Turkey is customer focus, continuous improvement, teamwork, process management, education, and the management of TQM principles such as supplier quality companies to determine the effect on performance. The survey study prepared for this purpose was applied to 500 large firms registered in the Istanbul Chamber of Industry (ISO) in 2009, and it was determined how each principle affects firm performance with the structural equation model. In this study, the relationship between TQM and firm performance in Turkey will be one of the most comprehensive studies investigated (Dahlgard-Park et al., 2018).

According to (Fernandes & Singh, 2021) it maintains: that, "the technique is the set of rules and guidelines that guide the activities carried out by researchers in each of the stages of scientific research" (p. 274). For the collection of information in the research work, has used the observation technique and the instrument was the survey, with a questionnaire of 20 items with a scale of measurement from 1 to 5. a) Observation: This research work uses the observation technique, which basically consists of observing and collecting data on the variable and the observed dimensions as they are presented in reality. Observation becomes a scientific technique to the extent that: 1) It serves an already formulated research objective. 2) It is planned systematically. 3) It is controlled and related to more general propositions rather than being presented as a series of interesting curiosities. 4) It is subject to validity and reliability checks. Natural observation has been developed from the position that values experience as a starting point for the generation of knowledge; that is, it starts from the direct observation of reality construction of subjectivities that interact to achieve the configuration for better education and training. Educational management is consolidated under mechanisms of change, integration, participation, direction, organization and an evaluation of permanent feedback, these develop as require improving or carrying out something within the educational context, so there must be needs within the environment that demand attention, planning and be managed within reasonable and targeted deadlines towards precise goals and with a view to the development of both the institution as of the people who work there.

Training is both a managerial and organizational tool that motivates employees and fulfils a duty to contribute to their skills, knowledge, abilities and personal development. At this point, educational efforts make significant contributions to the rational development of the efforts of employees who represent organizational intelligence to increase their individual and organizational performance. Employees produce information by processing some data by revealing their intellectual creativity, and creating added value on these data (Demir, 2000). Therefore, employees constantly evaluate organizational information and generate strategies by searching for new data sources. In this process, the human resources to do their job better and the formation of a human resources strategy in accordance with the organizational strategy requires the human element in the organization to have the desired and desired intellectual capacity and competence (Ince, 2000). Hence this research proposes the following hypotheses.

H1: Employee training has a positive and significant influence on the performance of higher education institutions in Yemen.

Pal Pandi et al. (2018) in their study, they determined the research area of the critical success factors of total quality management practice in higher education institutions. They reviewed the entire literature on their applications in various fields. His study, Pal Pandi et al. (2016) is based on a survey he conducted with 315 educational institutions from Australia, Canada, New Zealand, the UK and the USA. By determining the items found to be critical for the success of educational institutions, participants were asked to evaluate their general performance. Later, a logistic regression model was created to determine which success factors are possible determinants of corporate success. Two factors, Image and Resources, Coalition and Advanced Integration, were found to be the determinant pioneers of market success.

As a result of the effects of TQM understanding on management performance, it has been observed that internal performance has increased positively and profitability has increased in parallel. The effects of TQM understanding on customer satisfaction, motivation of employees, productivity and quality of products maximize business performance (Samson and Terziovski 1999). Integrity in the chain of activities provided by the TQM understanding requires the same integrity between performance dimensions to make a healthy evaluation. Each performance should be examined concerning the other, not as different dimensions (Chenhall, 1997). The effectiveness of the targets determined by the

management should be of a scale that covers all processes. The efficiency of the quality and efficiency dimensions in the processes are also integrated dimensions in terms of business performance. When the efficiency of the business in every field is integrated with the quality and efficiency in its activities, this will lead to efficiency throughout the enterprise, and the increase in the general performance of the enterprise will manifest itself with the increase in the budget and profitability. Deming considered quantitative performance measurements in enterprises as a fatal disease and foresaw that it should be abandoned. According to Deming, excessive adherence to working standards and goals will prevent continuous improvement efforts in enterprises. As an example, when workers are asked to produce a certain number of products on a certain day, the worker will produce that number, but quality problems will occur. In order to achieve zero error, which is the basis of TQM management, employees need to do their job right the first time. An employee who wants to reach a certain number will make faulty production because he competes with time. This contradicts the basic principle of TQM, zero error. Therefore, quantitative performance measures should be abandoned (Weaver, 1997). Hence, the current research hypothesises the following:

H2: Continuous improvement has a positive and significant influence on the performance of higher education institutions in Yemen.

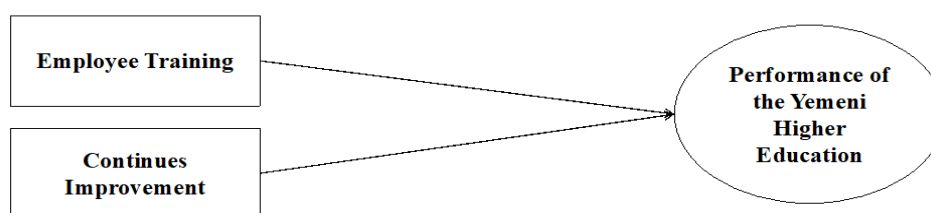


Figure: 1 Research conceptual model.

4. Methodology

The current research study, quality of the educational management of the higher educational institutions, corresponds to the quantitative approach because it follows a sequential and probative process, it begins with the generation of ideas to delimit the research. The researcher has come up with the most suitable methodology to be used in the study for collecting and analyzing the data, which is the quantitative methodology. The questionnaire was the tool of the study to collect the data. The data were analyzed using SPSS and Smartpls programs. For the current study, the population was all the employees in the higher education institutions in Yemen, making the total population 2100 employees. The unit of analysis for the current study was 272 employees in higher education institutions in Yemen. The random sampling technique involved a sample chosen based on the random of respondents, which was used in the current study. Therefore, this study employs empirical and descriptive analyses to establish the relationship between the variables. This study mainly relied on questionnaire data sources.

4.1 Multiple Regression Equation

Researchers have investigated the relationship between explanatory and response variables in many contexts (Araya & Miras, 2015). Still, there is a challenge when constructing models for educational management of the higher educational institutions, resulting from a broader collection of variables. However, empirical results are inconsistent (Mohd Abdulellah Yousuf Saeed, Bekhet, & Sciences, 2018); (Mohammed Abdulellah Yousuf Saeed, Bekhet, & Dhar, 2017). A regression equation with two or more explanatory variables is called a multiple regression (Araya, Dahalan, & Muhammad, 2021b); (Araya, Dahalan, & Muhammad, 2022). Thus, if the explanatory variable is one variable, it is called simple regression, and for more explanatory variables, it would be multiple regressions. Multiple regression is used to test the effects of n predictor variables on a single dependent variable, which can be written as:

$$Y_i = \beta_0 + \beta_1 X_{i1} + \beta_2 X_{i2} + \epsilon_i \quad (1)$$

Where:

Y_i = the response variable

X_i = the explanatory variables

β_0 = the intercept and is a constant term

From β_1 to β_2 are slope coefficients of determinations of the independent variables, and

ϵ_i = the errors terms

Equation (1) is the theoretical regression equation. Later, we will demonstrate it using the empirical equation (Kelley & Bolin, 2013). In this linear equation, from β_0 to β_3 are parameter estimates; when the independent variable, X_s , changes by one unit, the value of β_1 shows the amount of dependent variable, Y , changes while the other independent variables remain fixed (Araya, Dahalan, & Muhammad, 2021a); (AmirAlavifar, 2012). The linear multiple regression equation was used to test our hypotheses to generate empirical evidence and can be written as follows:

$$PYHE = \beta_0 + \beta_1 EMPT1 + \beta_2 CI2 + \varepsilon \quad (2)$$

Where:

PYHE _i =	Performances of the Yemeni Higher Education
β_0 =	The intercept is a constant term
β_1, β_2 =	Slope coefficients
EMPT1 =	Employee Training
CI2 =	Continues Improvement
ε =	error

5. Data Analysis and Results

To achieve the research objective, descriptive statistics analysis was employed to clarify the respondent's profile and the assigned factors of the research. The descriptive analysis shows the mean and standard deviation. Before proceeding to the inferential tests, explanatory tests were used; the purpose of conducting the explanatory test is to examine the respondents' profile, reliability and validity of the used model, several tests such as normality test, reliability test, and convergent validity. And finally, the direct effect test was employed.

5.1 Respondents Profile

The respondents' profile test had several types of respondent profile classifications asked for the sample, such as gender, age, education level, and experience level. These results are shown in Table 1. As shown in the table, 62.3% of the participants belong to the male gender category and ($n=169$), while 37.7% of the participants belong to the female gender category and ($n=103$). The result confirms that male respondents were the majority. The age levels of the participants were divided into 4 categories, where 52.5% ranged between 17-25 years of age with $n = (142)$, 37.4% ranged between 26-30 years of age with $n = (101)$, 8.5% ranged between 31-35 years of age with $n = (23)$, and 1.6% ranged between 36-40 years of age with $n = (6)$ from the sample. It is confirmed that most of the respondents are below the age of 30 years old. Most of the participants hold a PhD with a percentage of 52% with $n = (142)$, a diploma degree with 3.4% with $n = (9)$, and a bachelor's level with 44.6% with $n = (121)$. It ensures that all the participants are well-educated. The experience of the participants ranged from 1 to 9 years; 86.7% of the participants had an experience from 4 to 6 years with $n = (235)$, 12.2% had experience from 1 to 3 years with $n = (33)$, and only 1.1% has an experience from 7 to 9 years with $n = (4)$. Most of the respondents had experienced between 4-6 years.

Table: 1 Profile of Respondents (N = 272)

n	%	n	%
Gender	Education Level		
Male	169	Diploma	9
Female	103	Bachelor	121
		PhD	142
Age	Experience		
17-25 years	142	1 to 3 years	33
26-30 years	101	4 to 6 years	235
31- 35 years	23	7 to 9 years	4
36- 40 years	6		

5.2 Normality Test

The normality test is used in the study for the purpose of ensuring that there is a normal distribution in the data. The normality test uses the Skewness and Kurtosis values to measure the normal distribution. According to (Hair et al., 2012), the Skewness values should be ranged between -2 and +2, while the Kurtosis values should be ranged between -3 and +3. According to the results in the following table 2, the data showed normal distribution, where the variables (employee training, continuous improvement, and performance of higher education) have got acceptable results with Skewness range between - 0.328 and - 0.038 and Kurtosis range between - 0.957 and - 0.276.

Table: 2 Results of Skewness and Kurtosis for Normality Test

Constructs	Skewness	Kurtosis Statistic
Employee training	-.281	-.632
Continuous improvement	-.038	-.957
Performance of higher education	-.328	-.276

5.3 Construct Reliability and Convergent Validity

The reliability test was used to ensure that all the items used in the study were easy and understandable for the respondents and that there is internal consistency. According to (Hair et al., 2017), if the Cronbach alpha and composite reliability of the variables is greater than 0.70, then there is good internal consistency. According to the following table 3, the variables (employee training, continuous improvement, and higher education performance) have shown great internal consistencies with Cronbach alpha values between 0.774 and 0.878, and the composite reliability values between 0.739 and 0.853. Convergent validity implies how carefully the new scale is defined with different variables and proportions of a similar structure. The structure should not only be linked to relevant variables but should not correspond to different, random ones. The current research has used the average variance extracted (AVE) to be above 0.5. According to the following table 3, the variables (employee training, continuous improvement, and higher education performance) have got acceptable results with AVE ranging between 0.586 and 0.594.

Table: 3 Reliability and convergent validity

Constructs	Cronbach's alpha (> 0.7)	Composite Reliability (> 0.7)	Average Variance Extracted (AVE) (> 0.5)
Employee training	0.878	0.739	0.586
Continuous improvement	0.774	0.851	0.592
Performance of higher education	0.782	0.853	0.594

5.4 Descriptive Statistics

Descriptive statistics are short descriptive coefficients that summarize a particular index of information; this could be either a depiction of the whole or a population sample. Descriptive statistics are divided into focal trend rates and fluctuation rates (spread). Focus slope ratios include average, medium, and mode, while interchangeability rates include standard deviation, mean, minimum, and maximum variables. For the current study, descriptive statistics were employed to identify the respondents' perceptions of the questionnaire items. Table 4 shows that the minimum value used was 1, while the maximum value used was 5. The mean means for the variables (employee training, continuous improvement, and higher education performance) were 3.020, 3.382, and 3.268, respectively. These results show that all of the respondents agreed with the research items on average. Furthermore, the standard deviations for the subscale variables were 0.552, 0.622, and 0.765, respectively.

Table: 4 Descriptive Statistics for Study Variables

	N	Minimum	Maximum	Mean	Std. Deviation
ET	272	1.00	5.00	3.020	0.552
CI	272	1.00	5.00	3.382	0.622
PHE	272	1.00	5.00	3.268	0.765

Where: ET; employee training, CI; continuous improvement, PHE; performance of higher education

5.5 Direct Effect Test

The direct effect test is employed for the purpose of finding out the direct impact of employee training and continuous improvement on the performance of higher education in Yemen. This section presents the result of hypotheses testing for direct effect. The results are presented in table 5. The following conclusions are drawn based on the results shown in table 5:

1. There is a positive and significant relationship between employee training and the performance of higher education in Yemen with beta = 0.140, t-value = 2.615, and p-value = 0.009.
2. There is a positive and significant relationship between continuous improvement and the performance of higher education in Yemen with beta = 0.257, t-value = 3.643, and p-value = 0.000.

Table: 5 Summary of the Direct Effect

Hypothesis	Relationship	Std Beta	Std Error	t-value	p-value	Decision
H1	ET -> PHE	0.140	0.054	2.615	0.009	Supported

H2	CI -> PHE	0.257	0.071	3.643	0.000	Supported
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6. Discussion and Implications

The discussion section is the last step in the process of the findings. This section presents the results that are related to the research hypothesis and compares them with the results and findings of previous studies. It has been found that there are positive and significant relationships between (employee training and continuous improvement) and the performance of higher education in Yemen. These results are supported by the previous studies, where Pal Pandi et al. (2018) in their study, they determined the research area of the critical success factors of total quality management practice in higher education institutions and reviewed the entire literature on their applications in various fields. In his study, Pal Pandi et al. (2016) is based on a survey he conducted with 315 educational institutions from Australia, Canada, New Zealand, the UK and the USA. By determining the items found to be critical for the success of educational institutions, participants were asked to evaluate their general performance. Later, a logistic regression model was created to determine which of these success factors are possible determinants of corporate success. Two factors, Image and Resources, Coalition and Advanced Integration, were found to be the determinant pioneers of market success.

TQM enables organizations to acquire an abnormal state of brilliance to address client issues and institutionalize the mark picture, lessen costs by keeping away from blunders, exercise in futility and create organization forms as per Abdallah (2014). TQM is a culture, point of view and organization determination that endeavours to supply products and enterprises that prompt address client issues. This culture incorporates all activities as the organization did in the underlying stage: zero waste and zero mistakes. Quality thought has gone through numerous stages, fitting in each level of innovation and market request. Thus, the last layer of profitability choice was chosen by measurable observing of fantastic characters, at that point extending the procedure and picking up the possibility of quality as an important component in the delivery of goods and services (Samuel et al., 2010). According to (Azam, Rahman, Talib, & Singh (2012), the portal gradually receives quality attention to the emergence of TQM as a full-scale concept of parallel measurements, such as competition with concept and concurrent engineering. (Aghamolaei et al., 2014; Mohammad Mosadeghrad, 2014a) studies by all these authors indicate both strengths and weaknesses, none of which suggest any decisions on the issues faced by firms, although some common problems can be controlled, Such as planning and quality for development Continuous, operations management, staff participation and management leadership (Mohammad Mosadeghrad, 2014b).

(Sheerin et al., 2018) conducted a comprehensive literature study describing the relationships between TQM practices and examining their direct and indirect effects on various performance levels. He tested a proposed research model and hypotheses using cross-sectional mail survey data collected from firms operating in the USA. (Suárez-Barraza et al., 2019) examined critical success factors in restructuring the business process in higher education. For this purpose, data were collected from three private higher education institutions that have successfully started restructuring the business process in Malaysia. Seven critical success factors were found in restructuring the business process. These factors are; teamwork and quality culture, quality management system and satisfactory rewards, effective change management, less bureaucracy and exhibitors, information technology / information system, effective project management and sufficient financial resources.

TQM is a broad push to build up and make the atmosphere lasting, as the organization consistently enhances its capacity to convey top-notch items and administrations to its clients. While there is no generally concurred approach, TQM endeavours depend vigorously on the devices and systems that have just been created for quality control. TQM got broad consideration in the late 1980s and mid-1990s, preceding it was granted ISO 9000, lean assembling and six sigma (Mohammad Mosadeghrad, 2014b). There is no broad agreement on what TQM is and what actions are required by the organizations; however, a review of the original efforts of the US Navy gives a rough understanding of the implications of TQM. TQM can be compressed as a management framework for a client-driven organization that incorporates all representatives in continuous change. It utilizes powerful information, communication and communication to coordinate quality train into the organization's way of life and exercises (Mosadeghrad, 2014b).

The management of educational quality is supported by deontological, pedagogical, sociological and psychological principles, and why not also by philosophical principles. Deontological principles of research work, a term coined by Jeremy Bentham, considered as the science of morality and a branch of ethics whose purpose is to generate the ethical principles that every professional who exercises it has to assume. Etymologically, moral and ethical mean almost the same thing, with a special characteristic. Morality would be the set of rules and norms of behavior in which good and bad are established as criteria of human perfection. Above moral customs are the values that fulfill the function of universal principles: justice, love, truth, solidarity, integrity, honesty and fidelity.

7. Conclusion

In recent years, training strategy gains importance in international competition. The main purpose of education is to make individuals beneficial to society by creating a change of behavior in the desired direction. However, since individuals have different characteristics, the most difficult change is the change in human behavior. It becomes a necessity to enter into an innovation. Because the outputs of educational organizations affect other systems in society, they lead to social change and innovation. For this reason, educators have led the system to seek more effective and efficient working

methods. It is expected from educational organizations that the resources of well-educated people with diverse qualifications will be constantly passed over according to their needs.

The current research has been developed for the purpose of identifying the impact of employee training on the performance of higher education institutions in Yemen, as well as identifying the impact of continuous improvement on the performance of higher education institutions in Yemen. A comprehensive literature review was provided in the study to provide the study with a theoretical background. The literature review contained the related theories to the research topic. Also, the previous studies that highlighted the impact of total quality management and learning capability on performance were discussed. The researcher has used the most suitable methodology in the study for collecting the data and analyzing them, which is the quantitative methodology. The questionnaire has been used as the tool of the study to collect the data. The data was analyzed using SPSS and Smartpls programs.

This study found that there are positive and significant relationships between (employee training and continuous improvement) and the performance of higher education in Yemen. It has been widely accepted that continuous improvement is important to the success of TQM. TQM will be successful not only with the effort and activity of a particular person or group but with continuous improvement and management skills. For this, the importance given to the subject and the leadership of the senior management in the educational institutions to be applied is very important. Giving importance to long-term goals and participating in group work with determination in the unity of the target of all employees, disciplined, planned, from the top position to the bottom employees, training should be given to understand and apply TQM with certain goals.

References

- Aghamolaei, T., Eftekhari, T. E., Rafati, S., Kahnouji, K., Ahangari, S., Shahrzad, M. E., Kahnouji, A., & Hoseini, S. H. (2014). Service quality assessment of a referral hospital in Southern Iran with SERVQUAL technique: patients' perspective. *BMC health services research, 14*(1), 322.
- Al-Maamari, Q. A. (2020). The Effect of Total Quality Management (TQM) Practices on Individual Readiness for change with in Yemeni Oil Units.
- Al-shafei, A. I., Bin Abdulrahman, K., Al-Qumaizi, K. I., & El-Mardi, A. S. (2015). Developing a generic model for total quality management in higher education in Saudi Arabia. *Med Teach, 37*(sup1), S1-S4. <https://doi.org/10.3109/0142159X.2015.1006607>
- Aldholay, A., Abdullah, Z., Isaac, O., Mutahar, A. M. J. I. T., & People. (2019). Perspective of Yemeni students on use of online learning.
- Alsikkah, A. A., Alabbasi, H. A. S., Saeed, M. A. Y., & Alnaser, A. S. M. (2018). International Journal of Business Society. *International Journal of Business Society, 2*(2), 7-14.
- Aminbeidokhti, A., Jamshidi, L., & Mohammadi Hoseini, A. (2016). The effect of the total quality management on organizational innovation in higher education mediated by organizational learning. *Studies in Higher Education, 41*(7), 1153-1166. <https://doi.org/10.1080/03075079.2014.966667>
- Anis, A., & Islam, R. (2019). Prioritized challenges and critical success factors for delivering quality education in Malaysian private higher education institutions. *Quality Assurance in Education, 27*(4), 465-492. <https://doi.org/10.1108/QAE-11-2018-0122>
- Araya, A., Dahalan, J., & Muhammad, B. (2021a). Blockchain Technology and Regression Methods: A Case of Conceptual Framework. *International Journal of Business Society (ijo-bs), 5*(11), 450-463. doi:10.30566/ijo-bs/2021.11.66
- Araya, A., Dahalan, J., & Muhammad, B. (2021b). Model of Heterogeneous Agents and Noise Traders' Risk: A Case of Conceptual Framework. *International Journal of Business Society (ijo-bs), 5*(12), 493-502. doi:10.30566/ijo-bs/2021.12.70
- Araya, A., Dahalan, J., & Muhammad, B. (2022). The Relationship Between Financial Patterns and Exogenous Variables: Empirical Evidence from Symmetric and Asymmetric ADRL. *International Journal of Business Society, 6*(6), 638-661. doi:10.30566/ijo-bs/2022.06.90
- Araya, A., & Miras, H. (2015). Determinant Risk Factors on Valuation of Banks' Stock Return: A Case of Financial Institutions Management. *International Journal of Accounting and Business Management, 3*(1), 353-367. doi:10.24924/ijabm/2015.04/v3.iss1/353.367
- Azam, M., Rahman, Z., Talib, F., & Singh, K. (2012). A critical study of quality parameters in health care establishment: developing an integrated quality model. *International Journal of Health Care Quality Assurance, 25*(5), 387-402.
- Dahlgard-Park, S. M., Reyes, L., & Chen, C.-K. (2018). The evolution and convergence of total quality management and management theories. *Total Quality Management & Business Excellence, 29*(9-10), 1108-1128. <https://doi.org/10.1080/14783363.2018.1486556>
- Fernandes, J. O., & Singh, B. (2021). Accreditation and ranking of higher education institutions (HEIs): review, observations and recommendations for the Indian higher education system. *The TQM Journal, ahead-of-print*(ahead-of-print). <https://doi.org/10.1108/TQM-04-2021-0115>
- Farea, M. M. (2021). The Impact of Transformational Leadership Factors on Project Progress and which Factor has Significant Influence and Great Contribution towards Project Success. *Management*.
- Farea, M. M., & Mohammed, Z. M. M. (2020). Examining the mediating role of Psychological Empowerment in the relationship between Transformational Leadership and Project Success. *Journal of Critical Reviews, 8*(2), 1402-1413.
- Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the academy of marketing science, 40*(3), 414-433.
- Isaac, O., Aldholay, A., Abdullah, Z., Ramayah, T. J. C., & Education. (2019). Online learning usage within Yemeni higher education: The role of compatibility and task-technology fit as mediating variables in the IS success model. *136*, 113-129.
- Mohammad Mosadeghrad, A. (2014a). Essentials of total quality management: a meta-analysis. *International Journal of Health Care Quality Assurance, 27*(6), 544-558.
- Mohammad Mosadeghrad, A. (2014b). Why TQM does not work in Iranian healthcare organizations. *International Journal of Health Care Quality Assurance, 27*(4), 320-335.
- Mutahar, Y., Farea, M. M., Abdulrab, M., Al-Mamary, Y. H., Alfalah, A. A., & Grada, M. (2021). How to Enhance the Impact of Perceived Organizational Support on Knowledge Sharing? Evidence from Higher Education Sector. *Journal of System and Management Sciences, 11*(4), 27-46.
- Pal Pandi, A., Parantharan, K. P., & Jeyathilagar, D. (2018). Implementation of IEQMS model in engineering educational institutions – a structural *Quality Management & Business Excellence, 29*(1-2), 29-57.
- Pal Pandi . (2016). The IEQMS model for augmenting quality in engineering institutions – an *Total Quality Management & Business Excellence, 27*(3-4), 292-308.

Alselwi and Farea, (2022). The Impact of Total Quality Management (Employee Training and Continues Improvement) on the Performance of the Yemeni Higher Education Sector. International Journal of Business Society, 9 (9), 716-724

- Samuel, C., Gonapa, K., Chaudhary, P., & Mishra, A. (2010). Supply chain dynamics in healthcare services. *International Journal of Health Care Quality Assurance*, 23(7), 631-642.
- Saeed, M. A. Y., Bekhet, H. A., & Dhar, B. K. (2017). Constructing model to explore the influence of marketing audit on organizational performance– An innovative arena of marketing. *International Journal of Business Society*, 1(1), 37-47.
- Saeed, M. A. Y., & Bekhet, H. A. (2018). Influencing factors of mobile marketing among young Malaysian customers. *Australian Journal of Basic and Applied Sciences*, 12(9), 63-72.
- Sheerin, C. M., Stratton, K. J., Amstadter, A. B., Education, C. C. W. T. V. A. M.-A. M. I. R., & McDonald, S. D. (2018). Exploring resilience models in a sample of combat-exposed military service members and veterans: a comparison and commentary. *European Journal of Psychotraumatology*, 9(1), 1486121. <https://doi.org/10.1080/20008198.2018.1486121>
- Suárez-Barraza, M. F., Rodríguez-González, F. G., & Stanley Hart, H. (2019). Finding Kaizen core values in AACSB standards accreditation: a conceptual study. *Total Quality Management & Business Excellence*, 30(sup1), S53-S73. <https://doi.org/10.1080/14783363.2019.1665793>
- Zakaria, A. M., Farea, M. M., & Al-hodiany, Z. M. (2017). Leadership style effect on employee productivity in Al-Madinah International University. *International Sciences of Management Journal*, 1(1), 1-16.